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Electronic Supplementary Information

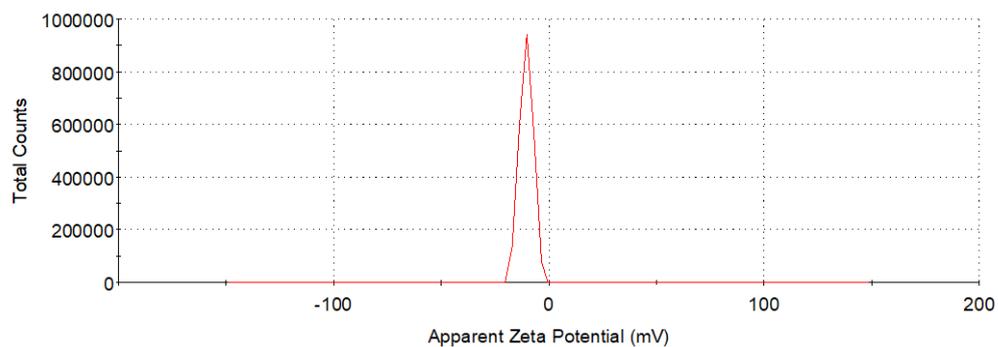
**Engineering a photosensitizer nanoplatform for amplified photodynamic
immunotherapy via tumor microenvironment modulation†**

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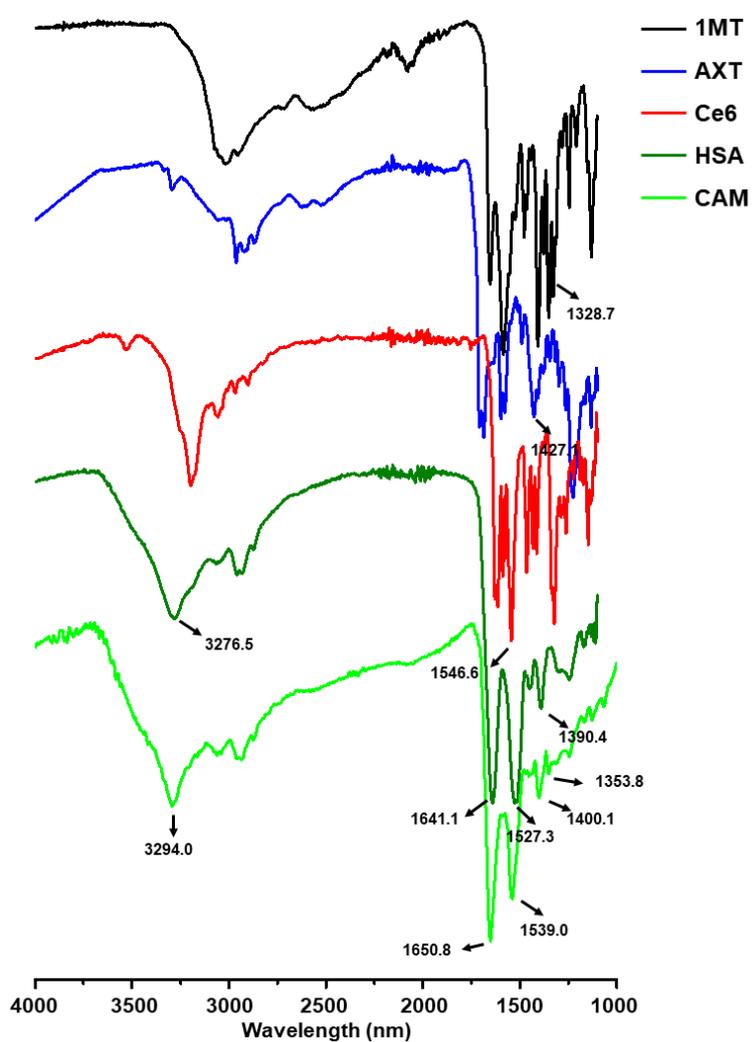
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1 **Supplementary Figures**



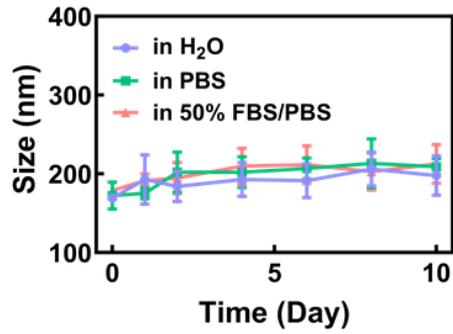
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3 **Fig. S1** Zeta potentials of CAM NPs.



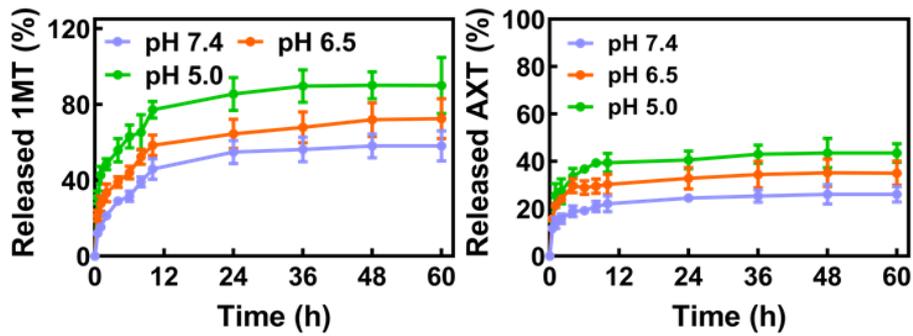
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5 **Fig. S2** FT-IR of 1MT, AXT, Ce6, HSA and CAM NPs.



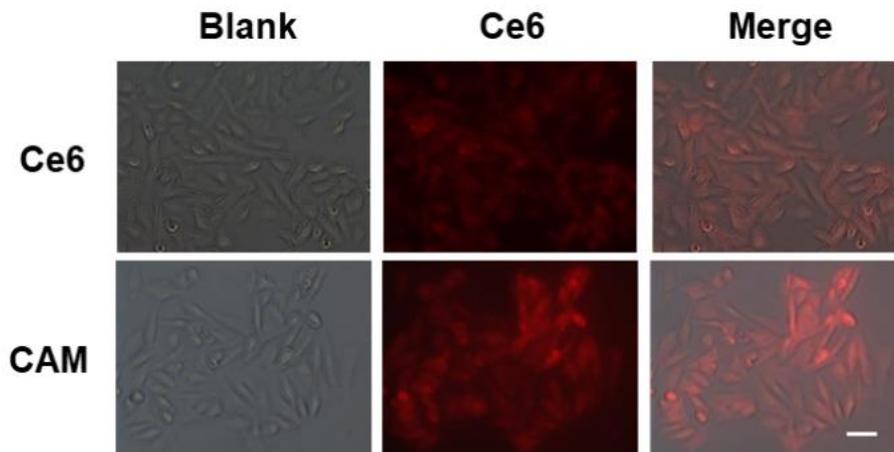
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2 **Fig. S3** The size of CAM NPs at different time point in different media.



3

4 **Fig. S4** *In vitro* release behavior of 1MT and AXT at pH 7.4, 6.5 and 5.0.



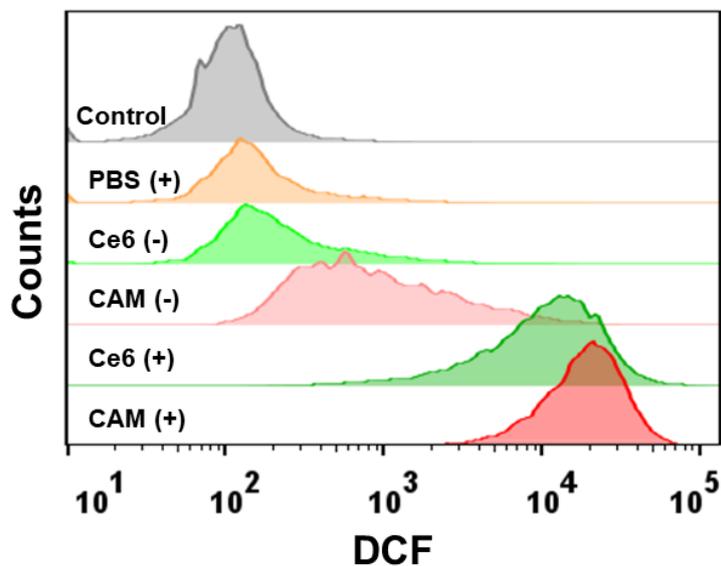
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6 **Fig. S5** Fluorescence microscopy images of cell uptake of Ce6 and CAM NPs after
 7 incubation for 6 h of B16F10 cells. Scale bar: 20 μ m.

8 **Table 1.** Quantitative analysis of fluorescence microscopy images of intracellular
 9 ROS production after different treatments. “(-)” and “(+)” represent the sample
 10 without or with laser irradiation, respectively.

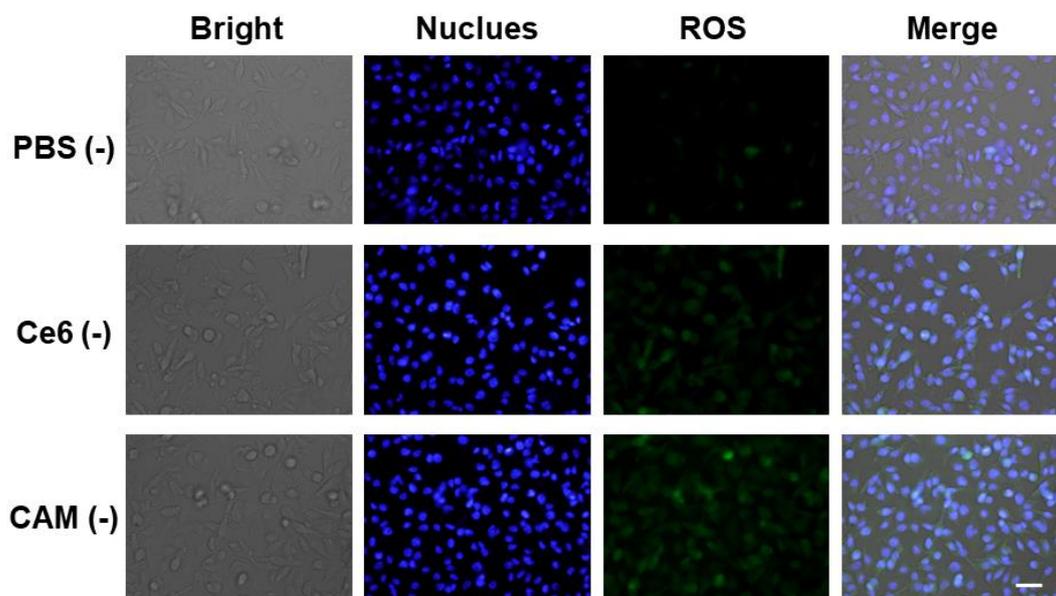
PBS (-)	Ce6 (-)	CAM (-)	PBS (+)	Ce6 (+)	CAM (+)
136.96	1470.98	1568.98	104.04	8156.97	8662.92

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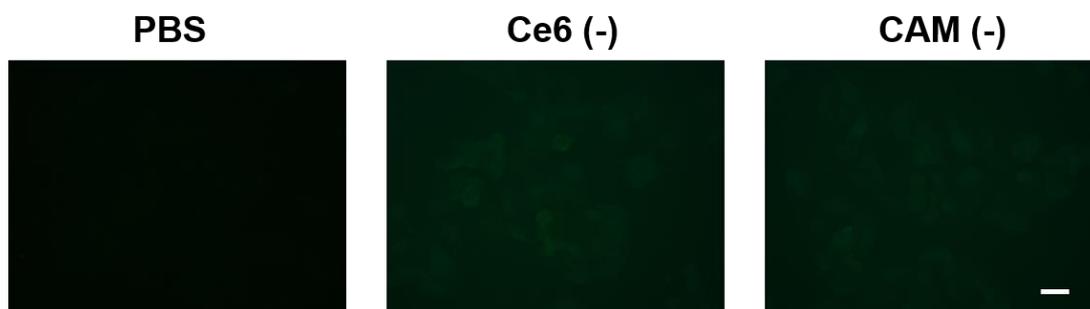
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3 **Fig. S6** Flow cytometry results of cellular ROS generation of Ce6, CAM NPs treated
 4 B16F10 cells with or without irradiation. “(+)” and “(-)” represent the sample with
 5 and without irradiation.

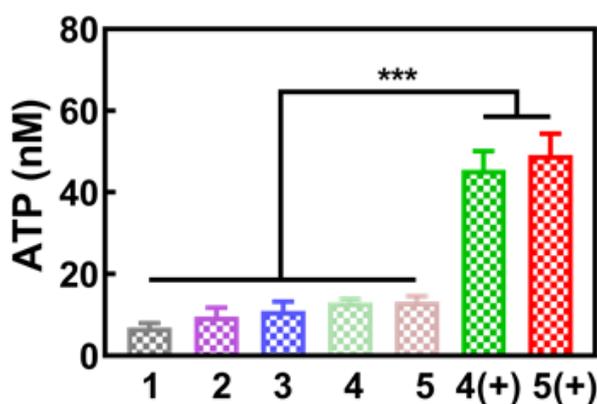


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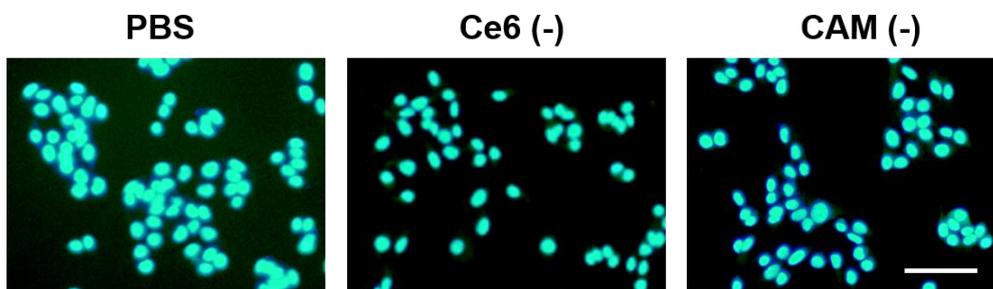
1 **Fig. S7** Fluorescence microscopy images of cellular ROS generation of Ce6, CAM
 2 NPs treated B16F10 cells without irradiation. Scale bar: 50 μm .



3
 4 **Fig. S8** Fluorescence microscopy images of the CRT exposure on B16F10 cells after
 5 different treatments without irradiation. Scale bar: 20 μm .

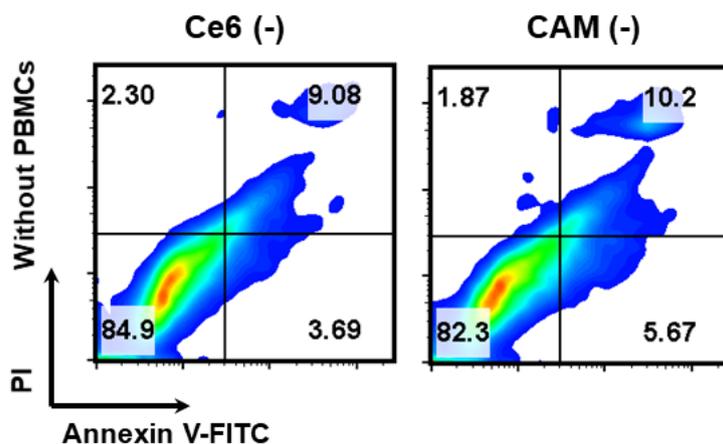


6
 7 **Fig. S9** ATP secretion of B16F10 cells after different treatments. (1) PBS, (2) 1MT,
 8 (3) AXT, (4) Ce6 and (5) CAM. “(+)” represents the sample with laser irradiation. (n
 9 = 3, mean \pm SD, *** p < 0.001, t -test).



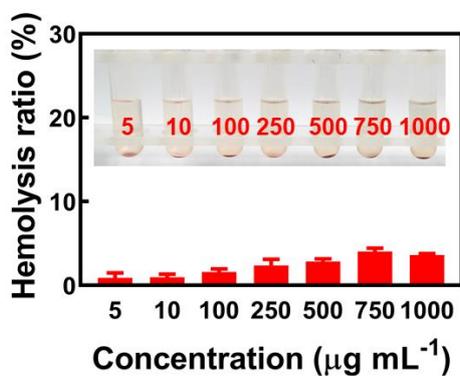
10
 11 **Fig. S10** Fluorescence microscopy images of HMGB1 release of B16F10 cells after
 12 different treatments without irradiation. Scale bar: 20 μm .

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2

3 **Fig. S11** Apoptosis of B16F10 cells after different treatments without irradiation.



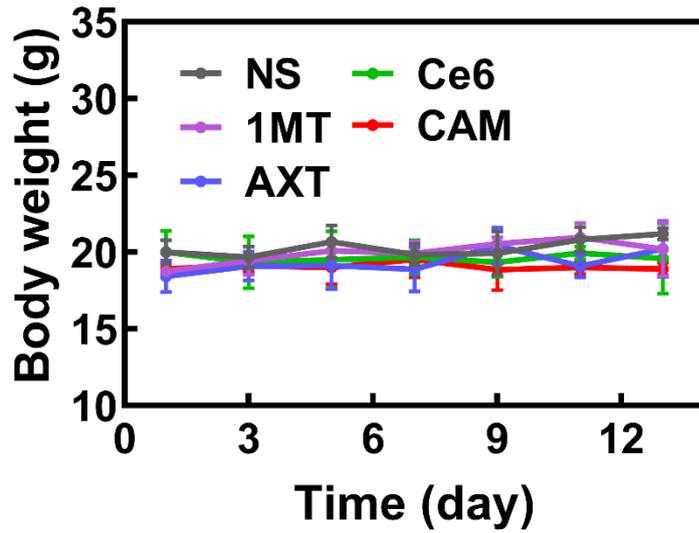
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5 **Fig. S12** Hemolysis ratio of CAM NPs at different concentrations (n = 3).

6 **Table S2.** TFI of main organs and tumors in treated mice at 24 h after the intravenous
7 injection

TFI	Heart	Liver	Spleen	Lung	Kidney	Tumor
Ce6	2.527E+07	4.871E+08	5.121E+07	1.162E+08	1.336E+08	9.358E+07
CAM	2.440E+07	1.309E+09	5.268E+07	1.176E+08	1.645E+08	1.407E+08

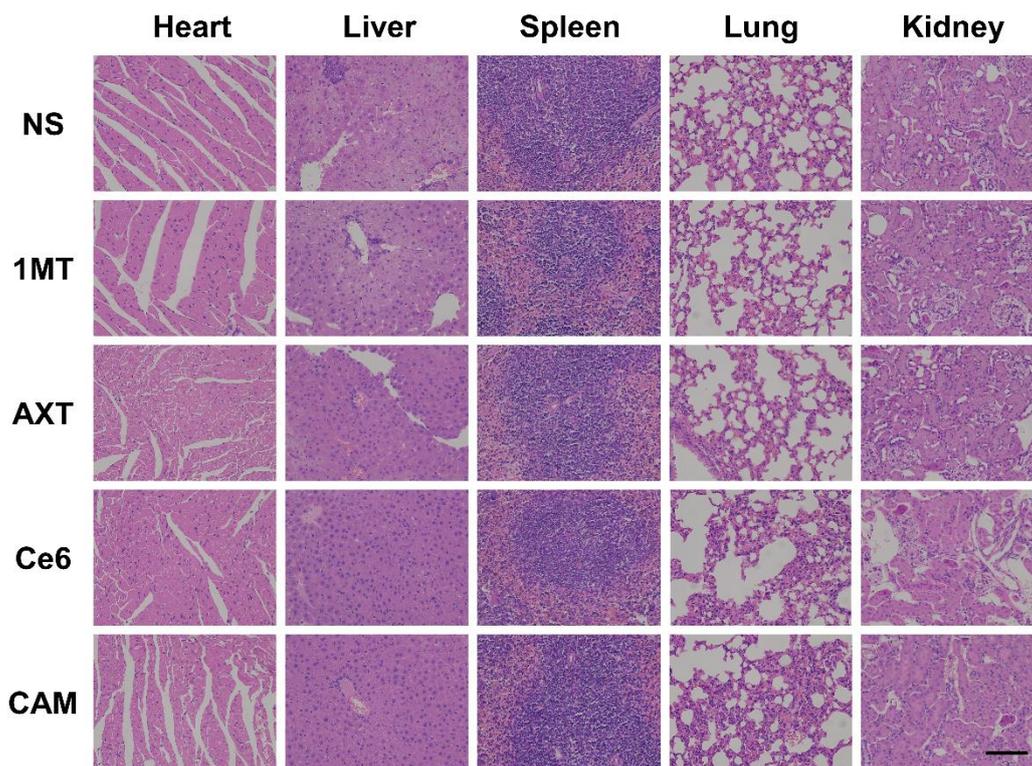
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2 **Fig. S13** Change in body weight of mice after different treatments in bilateral tumor

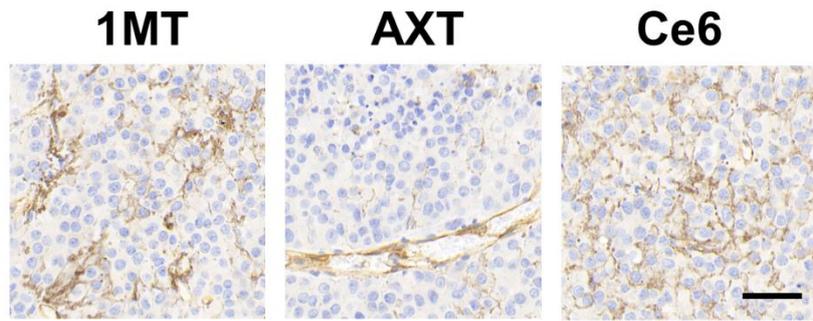
3 models (n = 5, mean ± SD).



4

5 **Fig. S14** H&E staining assay of different organs after different treatments. Scale bar:

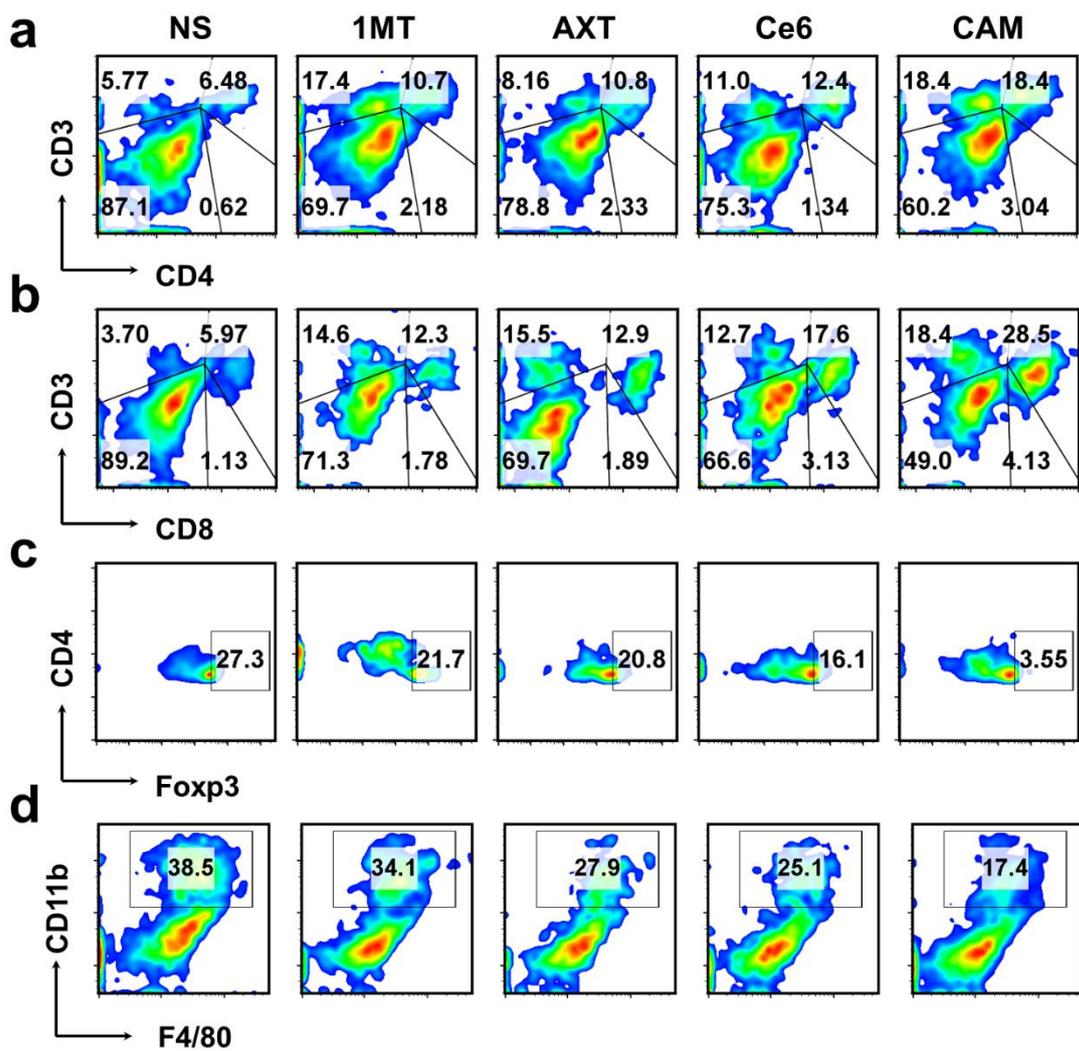
6 100 μm.



1

2 **Fig. S15** IHC staining of CD31 in primary tumor after different treatments. Scale bar:

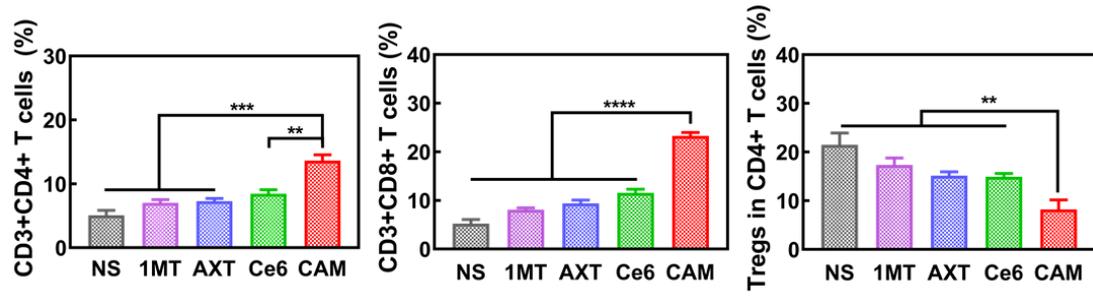
3 50 μ m.



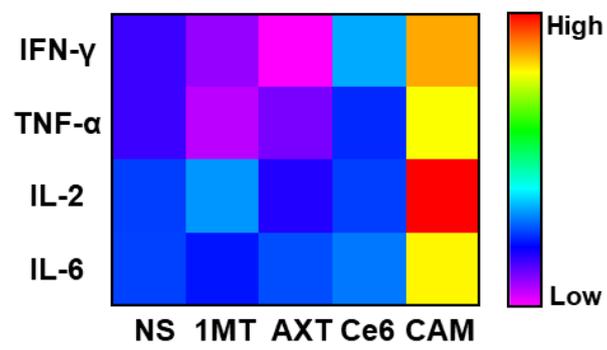
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5 **Fig. S16** Flow cytometry results of populations of a) Ths, b) CTLs, c) Tregs and d)

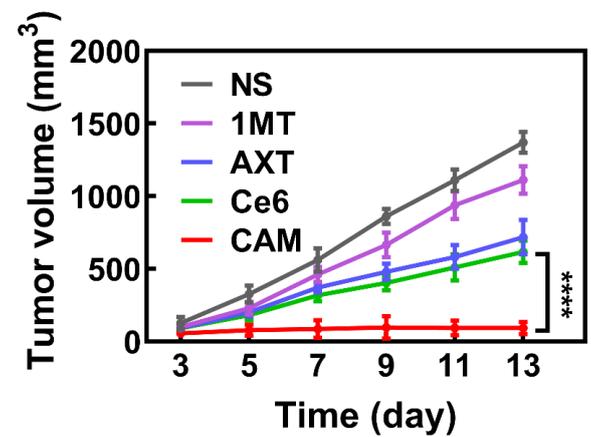
6 TAMs in primary tumor of different groups.



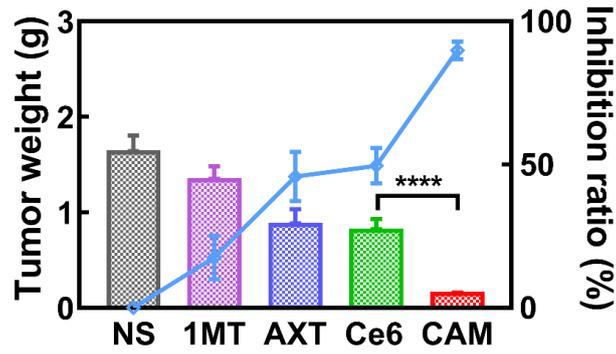
1
 2 **Fig. S17** Relative populations of Ths, CTLs and Tregs in splenic lymphocytes (n = 3,
 3 mean ± SD, ** $p < 0.01$, *** $p < 0.001$ and **** $p < 0.0001$, t -test).



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 5 **Fig. S18** Levels of serum cytokines of different treated mice.



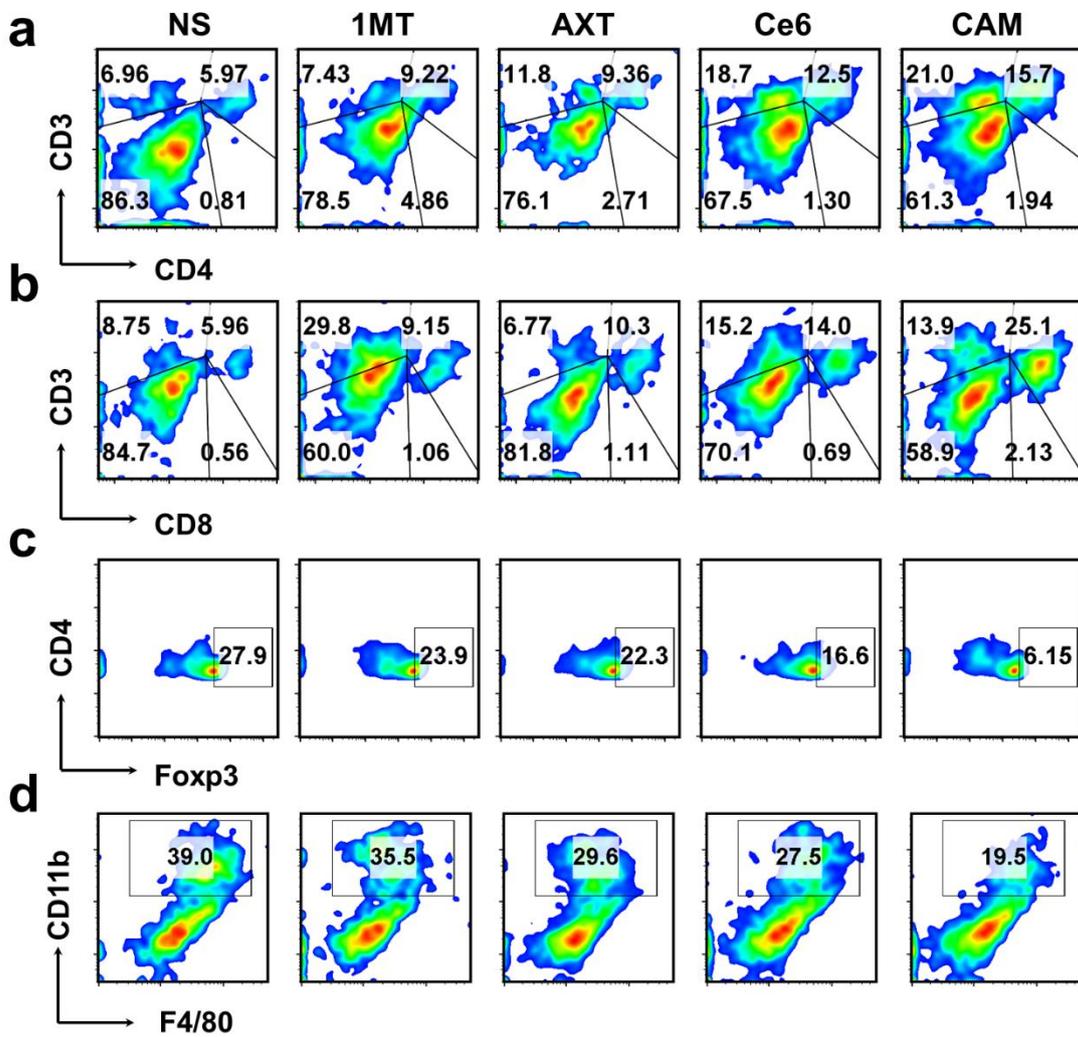
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 7 **Fig. S19** Change in average abscopal tumor volume (n = 5, mean ± SD, **** $p <$
 8 0.0001, t -test).



1

2 **Fig. S20** Change in average abscopal tumor weight and tumor inhibition ratio (n = 5,

3 mean ± SD, *****p* < 0.0001, *t*-test).



4

5 **Fig. S21** Flow cytometry results of populations of a) Ths, b) CTLs, c) Tregs and d)

6 TAMs in abscopal tumor of different groups.